

CLAIMS

1. An electrical switch for connecting and breaking a circuit, including:
 a connecting and breaking mechanism for connecting and breaking the circuit provided with at least a set of movable contacts and stationary contacts;
 5 a electromagnetism drive mechanism for controlling the contacts to be actuated so as to realize closed circuit;
 a housing for accommodating the movable contact and stationary contact;
 an arc-extinguishing mechanism disposed in the housing and corresponded to the movable and stationary contact;
- 10 a case connected to a base for accommodating the electromagnetism drive mechanism;
 a bedplate associated with the case; and
 a holding mechanism disposed on the bedplate for holding the contacts to connect the circuit after the contacts are connected, the holding mechanism is electromagnetic and has a set of electromagnetic attracting mechanism in which the movable iron core is made to be a pothook or a baffle mechanism, the movable iron core is attracted to make the contact mechanism hold the circuit connected when the electromagnetic attracting mechanism is powered on.
- 15 2. The electrical switch set forth claim 1, wherein:
 the pothook or baffle of said holding mechanism keeps the switch closed by means of hitching or ramming the movable bolt, said holding mechanism further includes a coil, a conducting magnet plate, a bracket, and a tension spring; said pothook intersects the top end of the conducting magnet plate, and has an inclined plane at its hook so as to disconnect the movable bolt.
- 20 3. The electrical switch set forth claim 1, wherein:
 said holding mechanism is an elasticity type, the pothook or baffle of said holding mechanism keeps the switch closed by means of elasticity, said holding mechanism further includes a spring, a stop button, and a reset button, said pothook or baffle abuts against the movable bolt.
- 25 4. The electrical switch set forth any one of claims 1-3, further includes a current limiting mechanism disposed on the bedplate for detecting and limiting over-current, said over-current mechanism includes a set of electromagnet corresponding to each of phase circuit and a set of connecting rod mechanism connected with thereof, said connecting rod mechanism has a rod which can rapidly thrust aside the movable iron core of the holding mechanism when the over-current occurs, and further includes a spring, a pushing plate, a pushing bar and a bracket.
- 30 5. The electrical switch set forth any one of claims 1-4, further includes a selection switch mechanism disposed on the bedplate, said selection switch mechanism comprises a set of movable and stationary slide slices, in which the movable slide slice moves along with the turnbutton bar, said selection switch may move both in the rotary direction and in the vertical direction to control the operating state of said switch.
- 35 40 6. The electrical switch set forth any one of claims 1-5, further includes a comprehensive protector, said comprehensive protector has a thermal element action means corresponding to each phase circuit, the thermal element action means can disconnect said switch when the over-current occurs , said comprehensive protector further has a phase failure mechanism corresponding to the main circuit which can disconnect said switch in detecting the phase failure.